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FOREST CONTROL

by

CONTINUOUS INVENTORY

"Today I have grown taller from walking
with the trees."

...Karle Wilson

Milwaukee, Wis. September, 1959 No. 66

"Research is a high-hat word that scares a lot of people. It needn't. It is rather simple. Essentially it is nothing but a state of mind - a friendly, welcoming attitude toward change. Going out to look for a change instead of waiting for it to come. Research, for practical men, is an effort to do things better and not be caught asleep at the switch. A research state of mind can apply to anything, personal affairs or any kind of business, big or little. It is the problem solving mind as contrasted with the let-well-enough alone mind. It is the composer mind instead of the fiddler mind. It is the 'tomorrow mind' instead of the 'yesterday mind'."

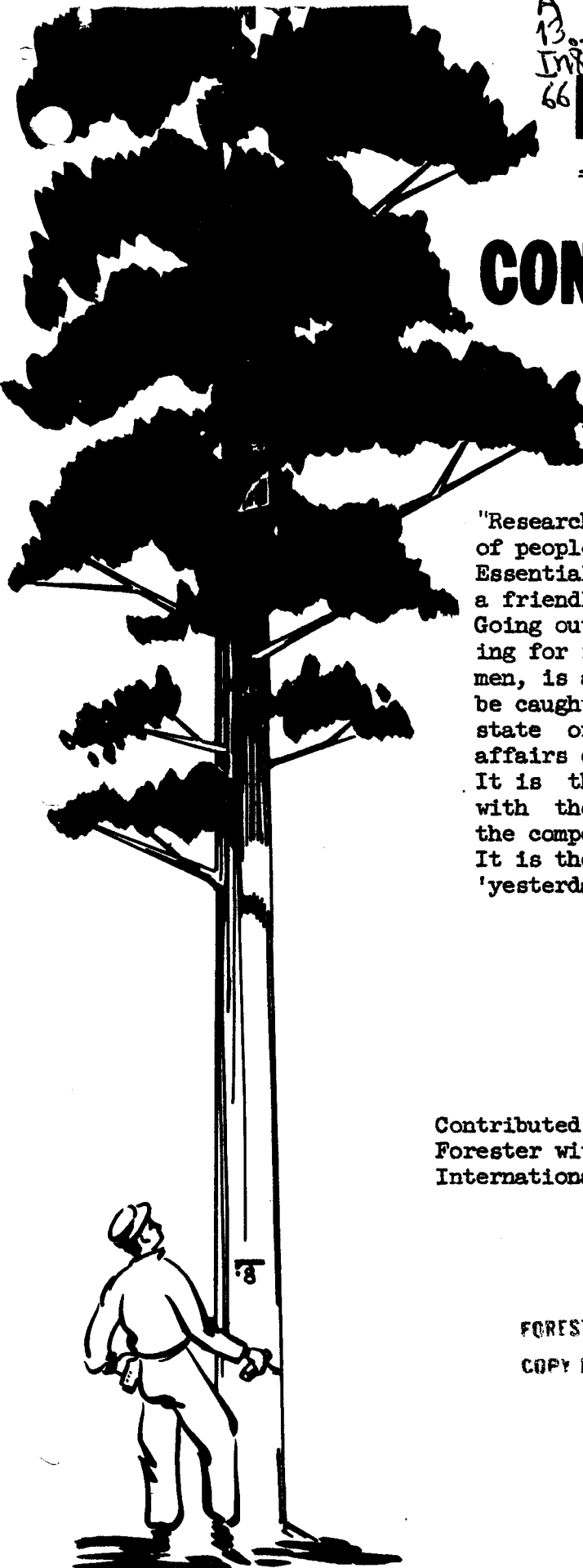
Charles Kettering

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CAL STOTT



SOUNDING OR WOMPING -- WHICH?

Among foresters and timber cruisers there is a cult which has implicit faith in sounding or womping trees to determine the presence and extent of rot in the butts. There are promiscuous wompers who go merrily through the woods pounding every tree in sight and there are others, perhaps the majority, who are more selective and less severe in their soundings.

The selective sounding of trees with a light, single bit axe can be helpful in determining the extent of rot in trees, but it is much less important in deciding the presence or absence of rot. Womping is bad, but selective sounding is good and here are a few rules and techniques to guide the tree sounding job when it is really essential.

HOW TO SOUND TREES FOR ROT

1. The presence of rot in trees should be determined visually in most cases. Sounding is seldom necessary until butt rot has been detected visually.
2. After the detection of rot, sounding is sometimes useful to secure a measure of the length of the butt off.
3. A half pound, single bit Sears Craftsman Axe, or equivalent, is most satisfactory for sounding pulpwood and small sawlog trees. The sounding edge of the axe should be rounded so that it will not cut into the bark. I am convinced that tapping transmits sound waves and vibrations which contribute to an improved judgment of hollows, holes and rots in tree butts. A short-handled axe with a tightly wedged wooden handle is the best transmitter. It should be firmly gripped in the hand while doing the sounding. Refer to the scale model illustrated.
4. Quick, well placed taps or light blows with the axe, beginning as high as possible on the trunk and working downward at one-foot intervals will determine the extent to which the rot has spread up into the trunk.
5. Sound the most seriously rotted side of the butt first, following up with the other sides to the extent necessary to decide the length of the butt off.
6. Trees growing high on windfall mounds or those severely leaning or growing in actual contact or rubbing against other trees do not sound out typically.
7. Learn to know the sound of solid, healthy, unrotted trees of all species when tapped lightly with a hand axe. A great variation between species occurs and the ear must be tuned in to slight differences.

8. Learn to know the tree species on which sounding with a light hand axe is most helpful.
9. Learn to distinguish between the sound waves of trees with solid butts and those with punk and cubical rots in the butt.
10. Learn to identify the most serious heart and sap rots and cankers, their age and the extent of internal damage to the wood fibres so that a minimum of tapping and pounding will be necessary.
11. Learn to know the outside appearance and inside effects of bumps, bulges and burls; straight, folded and spiral seams, scars, sun scalds, injuries, and rotted branch stubs. Incidence and extent of wood losses from these causes vary greatly by species.

CONCLUSIONS

Sounding trees is not an absolute guarantee that correct cull deductions will be made, but correctly applied, sounding is helpful. An occasional cruiser will express the thought that tree sounding does absolutely nothing for him. What he means to say is that he has never tried very hard or applied the right techniques. In these days of CFI with individual tree records, and the calculation of net scales, every trick of the trade to precisely determine cull deduction is important.

Sounding the butt section of standing trees by light tapping with a single bit, half-pound axe like the Craftsman can be most helpful in the determination of the extent of rot. Only then can the proper cull deduction be made. To submit trees to terrific, cambium killing blows with a heavy womping axe is neither helpful nor wise. After the ear has been trained to recognize sounding differences heavy promiscuous pounding is not necessary.

CAL STOTT,
Forester

Note: The next two issues will concern tree soundness problems and provide a descriptive check list of the common wood destroyers in living trees.

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PRIORITY LISTING OF TREE SPECIES IN WHICH SOUNDING IS HELPFUL

ALTHOUGH IN THE CASE OF THE UNDERLINED SPECIES SOMETIMES DIFFICULT

- | | |
|--------------------------|--------------------------|
| 1. Balsam fir | 10. Red oak |
| 2. N. white cedar | 11. The maples |
| 3. <u>Basswood</u> | 12. Yellow birch |
| 4. <u>American beech</u> | 13. <u>Hemlock</u> |
| 5. Scarlet oak | 14. Black gum |
| 6. Post oak | 15. <u>Red gum</u> |
| 7. Blk. jack oak | 16. <u>The hickories</u> |
| 8. Black oak | 17. <u>The elms</u> |
| 9. White oak | 18. <u>Black ash</u> |

PRIORITY LISTING OF TREE SPECIES IN WHICH SOUNDING IS DIFFICULT
BECAUSE THE WOOD IS SOFT AND THE CONTRAST BETWEEN ROTTED AND
SOUND TREES IS NOT GREAT WHEN THEY ARE TAPPED WITH AN AXE.

1. Basswood
2. White pine
3. Cottonwood
4. Balm of Gilead
5. Magnolia
6. Buck eye
7. Red gum
8. Soft elm
9. Yellow poplar
10. Black ash
11. Hemlock

PRIORITY LISTING OF TREE SPECIES IN WHICH SOUNDING IS DIFFICULT
BECAUSE THE TREE DISEASES INVOLVED SELDOM FORM CAVITIES AND THE
PUNKY WOOD IS WET AND FAIRLY SOLID WITHIN THE BOLE

- | | |
|------------------------|--------------------------------------------------------|
| 1. The aspen | White rot or <i>Fomes igniarius</i> . |
| 2. The maples | Yellow rot or <i>Polyporus glomeratus</i> . |
| 3. White and red ash | White rot or <i>Fomes fraxinophylus</i> . |
| 4. Balsam fir | Solid red heart or <i>Stereum sanguinolentum</i> . |
| 5. Jack and white pine | Red ring rot or <i>Fomes pini</i> in early stages. |
| 6. Yellow birch | White rot or <i>Fomes igniarius</i> . |
| 7. The elms | Ring shake associated with <i>Pleurotus ulmarius</i> . |
| 8. Hemlock | Ring shake associated with shoe string fungus. |
| 9. Black ash | Solid butt rot. |

Drawn to actual scale

